

## **Project Code and Title**

### **B.02.01.01.01 Motor Vehicle Impact Injury Mechanisms in Children**

#### **Project Objective**

To assess the performance of the various child restraint systems covered by FMVSS213 (infant seats, convertible seats and booster seats) and also vehicle safety belts and passenger side airbags.

#### **Background**

Under a mandate from Congress, the NHTSA has created a team of medical, biomechanical engineering and crash injury statistics researchers to advance the scientific understanding of crash injuries and identify potential countermeasures to mitigate injuries and their consequences.

#### **Problem Definition**

There are a number of issues relating to the use of child restraint systems in motor vehicles. Seats are often not used correctly, i.e. are wrongly placed or fastened, or are inappropriate for the weight and height of the child. In addition there have been a number of cases where airbags had the unintended effect of injuries which resulted directly from their deployment during an accident. Similarly the use of safety belts without booster seats has resulted in direct injuries. The study will allow a monitoring of the performance of FMVSS213 and the identification of problems in the current standards.

#### **Research Approach**

The research is being carried out at a level 1 trauma center. Both accident and injury data are collected and analysed. The research team brings together physicians, accident investigators and traffic safety engineers to discuss and review each case and identify the injury mechanism.

#### **Potential Impact/Application**

The study will enable NHTSA to monitor the changing injury patterns associated with new restraint systems. It also aids in identifying problems associated with incorrect and inappropriate use of restraint systems and could result in recommendations concerning the design of child safety seats and/or instructions relating to their use.

## Key Milestones

- Analysis of 200 cases by late-1998 in order to make recommendations to the Agency by end-1998.

RESOURCE REQUIREMENTS	FY 95	FY 96	FY 97	FY	FY
Contract Money (\$K)	225	139	245		

## Project Manager(s)

Nopporn Khaewpong

## Completion Date

October 1998

## Project Tasks

<u>Task</u>	<u>Title and Description</u>
Task 1:	Collection of about 40 cases per year of restrained children involved in motor vehicle crashes and admitted to CNMC.
Task 2:	Analysis of data to help in development of strategies for injury prevention.
Task 3:	Preparation of final report.

<b>Task</b>	<b>Start Date</b>	<b>Projected Completion Date</b>	<b>Status/Responsibility</b>
1	2/96	5/98	In progress
2	2/96	open	In progress
3	6/98	12/98	

### Supporting Contracts

<b>Task</b>	<b>Contract Number</b>	<b>COTR (phone)</b>	<b>Contracting Officer (phone)</b>	<b>Total Contract Cost (\$K)</b>
	DTNH22-91-Y-07350	(202)366-4703	Lamont O. Norwood (202)366-8573	1000